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Acoustic waves in polydispersed bubbly liquids

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Abstract

© Published under licence by IOP Publishing Ltd. The propagation of acoustic waves in polydispersed mixtures of liquid with two sorts of gas bubbles each of which has its own bubble size distribution function is studied. The system of the differential equations of the perturbed motion of a mixture is presented, the dispersion relation is obtained. Equilibrium speed of sound, low-frequency and high-frequency asymptotes of the attenuation coefficient are found. Comparison of the developed theory with known experimental data is presented.

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